WHAT IS CLAIMED IS:

1. The process for positioning a first sample plate in an analytical apparatus and for removing a second sample plate from the analytical apparatus which comprises:

(a) moving said first sample plate into said analytical apparatus along an entry path and

(b) concomitantly with step (a) moving said second sample plate from said analytical apparatus along an exit path, at least a portion of which is vertically spaced apart from said entry path and which prevents collision of said first sample plate with said second sample plate.

2. Apparatus for positioning a first sample plate in an analytical apparatus and for removing a second sample plate from the analytical apparatus which comprises:

(a) means for moving said first sample plate into said analytical apparatus along an entry path and

(b) means for moving said second sample plate concomitantly with movement of said first sample plate from said analytical apparatus along an exit path, at least a portion of which is positioned in a vertically spaced apart position from said entry path while avoiding collision of said first sample plate with said second sample plate.

3. The process of claim 1 wherein a portion of said entry path is positioned below said exit path.

4. The process of claim 1 wherein a portion of said entry path is positioned above said exit path.

5. The apparatus of claim 2 wherein a portion of said entry path is

positioned below said exit path.

6. The apparatus of claim 2 wherein a portion of said entry path is positioned above said exit path.

7. The apparatus of claim 2 wherein a first direction for moving said first sample plate and a second direction for moving said second sample plate are reversed after completing moving said first sample plate by step (a) and said second plate by step (b).

8. The apparatus of claim 5 wherein a first direction for moving said first sample plate and a second direction for moving said second sample plate are reversed after completing moving said first sample plate by step (a) and said second plate by step (b).

9. The apparatus of claim 6 wherein a first direction for moving said first sample plate and a second direction for moving said second sample plate are reversed after completing moving said first sample plate by step (a) and said second plate by step (b).

10. The process of claim 1 wherein a first direction for moving said first sample plate and a second direction for moving said second sample plate are reversed after completing moving said first sample plate by step (a) and said second plate by step (b).

11. The process of claim 3 wherein a first direction for moving said first sample plate and a second direction for moving said second sample plate are reversed after completing moving said first sample plate by step (a) and said second plate by step (b).

12. The process of claim 4 wherein the apparatus of claim 2 wherein a first direction for moving said first sample plate and a second direction for moving said second sample plate are reversed after completing moving said first sample plate by step (a) and said second plate by step (b).

13. The apparatus of claim 2 wherein the analytical apparatus comprises a MALDI-TOF mass spectrometer.

14. The process of claim 1 wherein the analytical apparatus comprises a MALDI-TOF mass spectrometer.